APPENDIX B
COMPENSATION AND PAYMENT
Revised October 2001

Contract Type: Hourly Rate with a Ceiling

Contract Ceiling: $ 101,400

Hourly Rates:

- Project Principal: $117
- Project Manager: $98
- Project Engineer: $74
- Geotechnical Engineer: $95
- Sr. Structural Engineer: $117
- Electrical Engineer: $98
- CAD Technician: $67
- Cost Estimator: $106
- Admin. Assistant: $36

Sverdrup will submit an invoice for its services monthly. Payment of invoices will be due upon presentation and will be made by wire transfer into an account designated by Sverdrup. If there are disputed items and /or amounts on any invoice, the balance of such invoice, after deducting any disputed items, will be paid in full, and the disputed items and amounts will be presented to Sverdrup for resolution as soon as such disputed items have been determined by Owner. Payments due, but unpaid for more than 30 days after presentation of the invoice, excluding any amounts and items disputed by Owner, will bear interest at 1% per month (or any lesser legal limit applicable) until paid.

RECEIVED JAN 1 8 2002

1.8

JE JACOBS

Sverdrup Civil, Inc.
Central Region Environmental
501 N. Broadway
St. Louis MO 63102-2121 USA

January 17, 2002

Mr. Sidney W. LeGrand, P.E.
City Engineer
City of O'Fallon, Illinois
255 South Lincoln
O'Fallon, IL 62269

Subject: City of O'Fallon, Illinois - Alternative Water Supply Study
Revised Conceptual Project Cost Estimate

Dear Mr. LeGrand:

Enclosed please find our revised conceptual project cost estimate to extend water service from St. Louis-Water Division to the O'Fallon, Illinois water system. We revised our original May 2000 estimate to service only the O'Fallon water system and to assume optimum construction conditions (based upon your letter request dated December 12, 2001).

Our revised project cost estimate of $16.6 million reflects a "best-case scenario" and is a reduction over our original conceptual estimate of $21.6 million. Our previous comparison of our May 2000 estimate with Illinois American Water Company's estimate is enclosed for your reference. Factors contributing to our revised conceptual cost estimate include:

- Reduced main length (from 70,000 lf to 47,000 lf) and reduced diameter (from 30" to 24" diameter). The revised transmission main route was developed for conceptual purposes and will need to be evaluated further prior to preliminary transmission main route selection. We have used a unit cost of $100/linear foot, which assumes minor utility interference. The unit cost of the 24-inch transmission main has been adjusted based on conversations with experienced contractors and similar projects bid recently. It should be noted that the reduced main length increases the distance from the Water Division's Chain of Rocks Water Plant, which may adversely impact the cost of water. Our conceptual estimate includes only items detailed in the attached table and does not include the wholesale cost of water and operating costs.

- Reduced unit price cost estimate for river crossing. The revised conceptual cost estimate is based on a unit cost of $25/inch of diameter per lineal foot. The original conceptual cost estimate is based on a conservative unit cost of $50/inch of diameter per lineal foot. This revised cost was developed based upon our previous HDD project experiences and assumes optimum subsurface conditions and no rock. The probability of realizing a unit cost of $25/inch of diameter per lineal foot for a HDD crossing of this size is very unlikely. The cost of the HDD crossing will be further evaluated and

priced after the soil borings on each side of the crossing have been performed and the results evaluated.

- Reduced number of isolation valve vaults and testing based proportionally on the reduced main length.

- Reduced engineering, legal, administration fees based on City assuming a more active role in these activities. Reduced project contingency percentage, which increases the risk of not having sufficient funds for unforeseen conditions.

We have prepared the revised conceptual cost estimate at the City's request. However, Sverdrup Civil, Inc. cannot substantiate these "best case scenario" assumptions without completing the remaining Alternative Water Supply Study tasks, which are essential prior to development of the project's conceptual cost estimate. The City should recognize that the conceptual project cost is subject to revision upon the City's authorization to Sverdrup to continue with the remaining Alternative Water Supply Study tasks.

Therefore, to assist your evaluation of the most economical water supply for the citizens of O'Fallon and Fairview Heights, we encourage you to proceed with completion of the Alternative Water Supply Study. This study will address the issues needed to develop a project cost estimate based on real conditions, including preliminary geotechnical data for the proposed river crossing, estimated future water demands and conceptual design information such as the size and location of the proposed transmission main, pumping and storage facilities. The Alternative Water Supply Study will also address project feasibility issues such as regulatory and permitting requirements, approximate easement needs and potential project funding sources. This study will provide the City with the knowledge needed to make informed decisions regarding the future water supply needs for the O'Fallon water system.

If you have any questions or comments, please feel free to contact me at 314.335.4723.

Very truly yours,

SVERDRUP CIVIL, INC.

Thomas J. Meinhart, P.E.

Enclosure

c: S. Hodges - SvCv

CITY OF O'FALLON, ILLINOIS
ALTERNATIVE WATER SUPPLY
CONCEPTUAL PROJECT COST ESTIMATES
Revised January 2002

Cost Items	Quantity	Unit	Unit Cost	Cost Estimate ($)
Construction Costs				
Water Main, 24"	47,000	lf	100	4,700,000
River Crossing, 24"	3,000	See Note 1	25	1,800,000
Bored Road/Railroad Crossing	5,000	lf	500	2,500,000
Pumping Station & Reservoir	1	each	3,500,000	3,500,000
Valve Vaults	4	each	150,000	600,000
Connection with City System/ Metering Vault	1	each	600,000	600,000
Pigging, Testing, Disinfection	1	each	170,000	170,000
Construction Subtotal				**13,870,000**
Property Acquisition & Easement Costs				
Pump Station & Reservoir Site/Access	1	each	300,000	300,000
Easements	1	each	200,000	200,000
Property & Easement Subtotal				**500,000**
Other Costs				
Engrg, Legal, Administration Fees			8%	1,109,600
Project Contingency			8%	1,109,600
Other Costs Subtotal				**2,219,200**
TOTAL PROJECT COST ESTIMATE				**16,589,200**

Notes:

1. Cost estimate for river crossing is based on $25/inch of diameter per lineal foot.

06/19/00

DETAILED ESTIMATE OF COST

New water main from the City of St. Louis to serve O'Fallon, Illinois.

	QUANTITY	UNITS	UNIT COST	ESTIMATED COST
MATERIAL				
24" DL Pipe	45000	ft	$27.19	$1,223,550
24" Butterfly Valves	11	ea	$1,950.00	$21,450
24" Fittings	50	ea	$1,250.00	$62,500
SUBTOTAL				$1,307,500
TAX			6.500%	$84,988
TOTAL MATERIAL				$1,392,488
INSTALLATION COSTS				
Contractor Installation 24"	45000	ft	$80.00	$3,600,000
Contractor Bore & Case	7200	ft	$300.00	$2,160,000
Contractor Mississippi River Bore (pipe includec	3000	ft	$521.00	$1,563,000
SUBTOTAL				$7,323,000
PERMITS				
EPA	1	ea	$1,600.00	$1,600
IHPA - Phase 1 Study	1	ea	$15,000.00	$15,000
City of St. Louis	1	ea	$1,000.00	$1,000
City of East St. Louis	1	ea	$1,000.00	$1,000
St. Clair County	1	ea	$1,000.00	$1,000
Illinois Deapartment of Transportation	1	ea	$1,000.00	$1,000
U. S. Army Corp of Engineers	1	ea	$10,000.00	$10,000
East Side Sanitary District	1	ea	$1,000.00	$1,000
SUBTOTAL				$31,600
RAILROAD CROSSING AGREEMENTS				
Preparation of Applications and Agreements	13	ea	$1,000.00	$13,000
Acquisition Cost	13	ea	$3,000.00	$39,000
Insurance	13	ea	$500.00	$6,500
Railroad Labor / Inspectors	13	ea	$2,000.00	$26,000
SUBTOTAL				$84,500

	QUANTITY	UNITS	UNIT COST	ESTIMATED COST
ENGINEERING				
Feasibility Study			$225,000.00	$225,000
Design			$350,000.00	$350,000
Bidding Services			$10,000.00	$10,000
Construction Administration			$90,000.00	$90,000
Resident Project Observation	1008	hr	$60.00	$60,480
SUBTOTAL				$735,480
EASEMENTS				
Preparation of Easement Documents			$50,000.00	$50,000
Easement Acquisition			$300,000.00	$300,000
Recording Fees			$1,000.00	$1,000
Procurement Cost			$30,000.00	$30,000
SUBTOTAL				$381,000
BOOSTER STATION				
Purchase Booster Station	1	ea	$450,000.00	$450,000
Contractor Installation	1	lump sum	$125,000.00	$125,000
Land Acquisition	1	lump sum	$30,000.00	$30,000
Site Preparation			$90,000.00	$90,000
SUBTOTAL				$695,000
MASTER METER VAULT				
Purchase Meter Vault	1	ea	$100,000.00	$100,000
Contractor Installation	1	lump sum	$85,000.00	$85,000
Site Preparation	1	lump sum	$10,000.00	$10,000
SUBTOTAL				$195,000
GROUND STORAGE TANK				
Land Acquisition	1	lump sum	$60,000.00	$60,000
Purchase Tank	1	ea	$1,200,000.00	$1,200,000
Contractor Installation	1	lump sum	$150,000.00	$150,000
SUBTOTAL				$1,410,000
SUBTOTAL ALL CATEGORIES				$12,248,068
O & C			10.00%	$1,224,807
TOTAL				$13,472,874

06/19/00

DETAILED ESTIMATE OF COST

New water main from the City of St. Louis to serve O'Fallon, Illinois.

	QUANTITY	UNITS	UNIT COST	ESTIMATED COST
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St. Clair County	1	ea	$1,000.00	$1,000
Illinois Deapartment of Transportation	1	ea	$1,000.00	$1,000
U. S. Army Corp of Engineers	1	ea	$10,000.00	$10,000
East Side Sanitary District	1	ea	$1,000.00	$1,000
SUBTOTAL				$31,600
RAILROAD CROSSING AGREEMENTS				
Preparation of Applications and Agreements	13	ea	$1,000.00	$13,000
Acquisition Cost	13	ea	$3,000.00	$39,000
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SUBTOTAL				$195,000
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Purchase Tank	1	ea	$1,200,000.00	$1,200,000
Contractor Installation	1	lump sum	$150,000.00	$150,000
SUBTOTAL				$1,410,000
SUBTOTAL ALL CATEGORIES				$12,248,068
O & C			10.00%	$1,224,807
TOTAL				$13,472,874

+ 31,600 + 84,500 = 851,580

-30,000 = 665,000

-60,000 = 1,350,000

2015,00

1.8

C O P Y

May 30, 2000

Mr. R. Patrick Judge
Assistant City Engineer
O'Fallon City Hall
255 South Lincoln
O'Fallon, IL 62269

Subject: Alternative Water Supply
Conceptual Project Cost Estimate

Dear Mr. Judge:

At your request, we have reviewed the concept of constructing a pipeline and pumping facilities to convey potable water to the City of O'Fallon, Illinois from the City of St. Louis Water Division. We have identified five (5) possible points of connection with the City of St. Louis system north of downtown starting at the Chain of Rocks Water Treatment Plant and proceeding south to the Bissell Point area. We have also identified two (2) possible points of connection south of downtown near South Broadway and Bates and at the end of South Jefferson.

From these general areas of connection, two very preliminary pipeline routes have been plotted and are shown in yellow on the accompanying figure. The northern route is approximately 64,000 feet in total length and the southern route is approximately 72,000 feet in total length. The connection with the City of O'Fallon is in the vicinity of Highway 50 and 161 at French Village. We have selected the southern route as the basis of our conceptual project cost estimate.

Assumptions used in preparing the conceptual project cost estimate are as follows:

1. O'Fallon peak day demand = 8 mgd
2. Allowance for other water customers = 4 mgd
3. Overflow elevation in O'Fallon system = 720' MSL
4. 30,000 ft. of pipe will be in public right-of-way
5. 40,000 ft. of pipe on private easement
6. Initial pumping station capacity = 12 mgd
7. Ground storage reservoir capacity = 2 million gallons
8. Property needed for pumping station and reservoir site = 5 acres
9. Mississippi River crossing accomplished by horizontal directional drilling
10. Drilling is expected to be predominately in alluvial subsurface conditions
11. No rock excavation is included for pipeline construction

The conceptual project cost estimate is attached for your review. Please be advised that this cost estimate should be considered very preliminary. Our brief table-top study did not include hydraulic analysis, property research, subsurface exploration and research, field route surveys, and regulatory agency discussions, all of which are critical to the accuracy of a thorough feasibility study.

We appreciate the City staff's confidence in the Sverdrup team and look forward to working with you during the course of the detailed study. Please feel free to give me a call with any questions you may have on the cost estimate.

Very truly yours,

SVERDRUP CIVIL, INC.

Daniel J. Nichols, P.E.
Project Principal

Enclosures

c: Lyndon J. Joost, TWM

bc: Meinhart / C5X54100 -

C O P Y

ALTERNATIVE WATER SUPPLY

CITY OF O'FALLON, ILLINOIS

CONCEPTUAL PROJECT COST ESTIMATE
MAY 2000

Construction Costs	
70,000 ft.± of 30" diameter water main	$ 5,250,000
3,000 ft. ± of 30" river crossing	$ 4,500,000
5,000 ft. ± of bored road / railroad crossings	$ 2,500,000
Pumping Station & Reservoir	$ 3,500,000
Valve Vaults (6)	$ 900,000
Connection with City System / Metering Vault	$ 600,000
Pigging, Testing, Disinfection	$ 250,000
Construction Subtotal	**$17,500,000**
Property Acquisition & Easement Costs	
Pump Station & Reservoir Site / Access	$ 300,000
Easements (40,000 ft. @ $5.00/ft.)	$ 200,000
Property Acquisition & Easement Subtotal	**$ 500,000**
Other Costs	
Engineering, Legal, Administrative Fees (10%)	$ 1,800,000
Project Contingency (10%)	$ 1,800,000
Other Subtotal	**$ 3,600,000**
TOTAL PROJECT COST ESTIMATE	**$21,600,000**

NOTES TO FINANCIAL STATEMENTS
(continued)
April 30, 2001

Note 14: Leases (continued)

B. The City entered into an agreement in December 1997 with a long distance carrier to lease space on a water tower. The agreement calls for an option fee of $8,750 for the year 2001. If the carrier agrees to the contract, the monthly rent would be $1,250 for a fiscal year period, with two (2) additional five year periods available.

Note 15: Statistical Data

	4/30/01	4/30/00
Number of customers billed		
Water	13,858	13,674
Sewer	7,508	7,353
Number of gallons sold during year	1,066,608	1,171,614
Number of gallons purchased during year (in thousands of gallons)	1,312,185	1,343,651
Percentage of water billed	81.3%	87.2%

Note 16: Component Unit

The City recognizes the library special revenue fund along with the library capital projects construction fund and library bond issue debt service fund as a component unit. The summarized financial data is as follows as of April 30, 2001 and for the year then ended.

	Special revenue	Debt service	Capital project	Total
ASSETS				
Cash and cash equivalents	$ 415,322	$ 26,200	$ -	$ 441,522
LIABILITIES				
Cash overdraft	-	-	88,624	88,624
EQUITY				
Fund balance - restricted	$ 415,322	$ 26,200	$ (88,624)	$ 352,898
REVENUES				
Taxes	$ 404,225	$ 139,359	$ -	$ 543,584
Interest	19,322	-	-	19,322
Grant	24,715	-	-	24,715
Other	65,016	-	-	65,016
	513,278	139,359	-	652,637

(continued on next page)

RECEIVED OCT 19 2001

JE JACOBS

Sverdrup Civil, Inc.
13723 Riverport Drive
Maryland Heights, MO 63043 USA

Dear

October 16, 2001

Mr. Sidney W. LeGrand, P.E.
City Engineer
City of O'Fallon, Illinois
255 South Lincoln
O'Fallon, IL 62269

Subject: City of O'Fallon, Illinois - Alternative Water Supply Study
Information Requested by City on October 3, 2001

Dear Mr. LeGrand:

In response to our meeting on October 3 regarding the future direction of the Alternative Water Supply study, we are enclosing the following items requested by the City. Please distribute to City staff as needed.

- Example wholesale water contract from the City of Saint Louis Water Division (3 copies)
- Memorandum summarizing our review of the cost estimate developed by Illinois American Water Company for a new water main from the City of St. Louis to serve O'Fallon, Illinois (3 copies)
- Request for Billing Rate Adjustment Letter (3 copies)

We look forward to continuing this study of an alternative water supply for the City of O'Fallon, Illinois. Please feel free to contact me at (314)770-4014 with any questions regarding this project.

Very truly yours,

SVERDRUP CIVIL, INC.

Susan E Fahnestock

Susan E. Fahnestock, P.E.

Attachments

c: S. Hodges-SvCv
T. Meinhart-SvCv
R. Burk – TWM w/ attachments
C5X56400-521 w/ attachments

JE JACOBS

Sverdrup Civil, Inc.
13723 Riverport Drive
Maryland Heights, MO 63043 USA
314.770.4894 (fax) 314.770.5120

August 9, 2001

Mr. M.A. Huq
City of O'Fallon, Illinois
255 South Lincoln
O'Fallon, IL 62269

Subject: City of O'Fallon, Illinois - Alternative Water Supply Study
Project Status

Dear Mr. Huq:

The purpose of this letter is to document Sverdrup's understanding of the current status of the subject project. At our meeting on May 1, 2001, Sverdrup presented the draft Preliminary Findings Memorandum to the City staff, and it was determined that the City Administrator and Mayor would contact the following potential partners to determine if they were interested in pursuing the project with the City of O'Fallon:

- National Steel (Granite City)
- Village of Pontoon Beach (only if National Steel is committed)
- Scott Air Force Base
- City of Edwardsville
- Village of Caseyville

Sverdrup informed the City personnel that this information is required prior to Sverdrup's commencing work on Task 2 of the project, which includes the conceptual design of the required facilities. Since the May 1, 2001 meeting with the City, we have contacted your office on a frequent basis to determine if the City has obtained the information. As of this date, it is our understanding that the information has not been obtained by the City. Therefore, Sverdrup is unable to proceed with the remaining project tasks.

In an effort to plan for the resources required by Sverdrup and Thouvenot Wade & Moerchen to complete this important project, we kindly request that the City provide Sverdrup with an estimated timeframe when the information will be obtained and authorization to proceed with the remaining tasks will be granted.

We anxiously await your response. Please feel free to contact me at (314) 770-4723 with any questions regarding this project.

Very truly yours,

SVERDRUP CIVIL, INC.

Thomas J. Meinhart, P.E.
Project Manager

c: S. Hodges-SvCv
S. Fahnestock-SvCv
R. Burk – TWM
C5X56400-521

RECEIVED MAY 1 1 2001

JE Sverdrup
A Jacobs Company

Sverdrup Civil, Inc.
St. Louis Environmental

Meeting Memorandum

To: **Distribution**

From: **Susan E. Fahnestock, P.E.**

Subject: **City of O'Fallon, Illinois**
Alternative Water Supply Project
Project Review Meeting for Task 1-Preliminary Findings Memorandum

---

A meeting was held for the above referenced project on May 1, 2001, at O'Fallon City Hall. The purpose of the meeting was to review the Draft Preliminary Findings Memorandum. A copy of the meeting agenda is attached. The following individuals were in attendance:

Sverdrup Civil, Inc.	City of O'Fallon	Thouvenot, Wade & Moerchen, Inc.
Thomas J. Meinhart	M. Huq	Randy Burk
Susan Fahnestock	Sid LeGrand	
	Dean Rich	
	Craig S. Owens	

Status of Potential Water Supply Partners

TWM personnel provided an overview of discussions with potential water supply partners as follows:

1. National Steel (Granite City) is interested in purchasing water from the City. D. Rich suggested that any agreement with National Steel include a guarantee that they will purchase water for a minimum numbers of years (say 20).

2. Village of Pontoon Beach is interested, but presently has a 40-year contract with Illinois-American Water Company (IAWC). If rates from O'Fallon are competitive, Pontoon Beach personnel indicated that they may try to break their IAWC contract.

3. City of Edwardsville is not interested in partnering due to recent upgrades to their water treatment facility. However, due to the size of their service area and a potential need for alternative service they may be interested in the purchase of water.

4. Village of Glen Carbon is not interested as it has a 20-year service agreement with City of Edwardsville.

5. City of Collinsville is not interested in partnering with O'Fallon, but expressed interest in selling water to the City of O'Fallon. City staff indicated concern that Collinsville would not be able to economically supply water for future growth in O'Fallon. Therefore, City staff does not feel that connecting with Collinsville is a realistic option at this time.

6. Village of Maryville has been unresponsive to requests for potential interest. S. LeGrand offered the name of the Village attorney, Steve Wigginton. R. Burk will attempt to contact Mr. Wigginton.

7. Village of Caseyville indicated that they were not interested in partnering as they are currently planning to construct their own water treatment plant. The Village is concerned about having to rely on IAWC for emergency service.

8. SLM Water Commission is not interested in partnering due to recently expanded water treatment facility. SLM was initially interested in selling water to City of O'Fallon, but further investigation indicated that servicing the City of O'Fallon would require significant capital improvements, such as doubling current water treatment plant capacity.

9. Scott Air Force Base (AFB) may be interested in purchasing water from the City of O'Fallon if costs are competitive with IAWC. They currently pay about $1.40-$1.60 per 1000 gallons. D. Rich indicated that the City has had several conversations with Scott AFB over the years concerning water and sewer service. He believes Scott AFB is a viable customer for the City.

10. The City of O'Fallon's water system should be fed from the West, due to the size and alignment of the City's distribution system.

11. The City of O'Fallon does not currently have a contract with IAWC, who continues to provide them with water.

Proposed Action Plan to Gain Additional Interest

City staff agreed that the following entities appear to be the most viable partners/customers in this alternative water supply project:

- National Steel (Granite City)
- Village of Pontoon Beach (only viable if National Steel is committed)
- Scott Air Force Base
- City of Edwardsville
- Village of Caseyville

City of O'Fallon personnel will contact each of these parties to discuss the proposed water supply project and to determine whether the level of interest is high enough for them to be included in the conceptual design of the project.

TWM personnel will provide M. Huq with contact information.

Contact with Illinois –American Water Company

TWM personnel will contact IAWC to see if they are interested in joining the City of O'Fallon in the proposed alternative water supply project. City personnel suggested contacting Terry Gloriod, President of IAWC. TWM personnel will not discuss information concerning O'Fallon's plans nor discussions with contacted parties and will direct all such questions to the Mayor of O'Fallon.

Review/Approval of Population Projections

SvCv personnel reviewed the population projections developed in the Draft Preliminary Findings Memorandum (see attached Table 2, Population Projections, for O'Fallon and Fairview Heights). Projections are based on Year 2000 census data and an annual increases of 3 percent per year for O'Fallon and approximately 2.16 percent per year for Fairview Heights. The populations are slightly higher than those developed in the "Water Distribution System Analysis and Capital Improvement Plan for City of O'Fallon, Illinois", January 1997, prepared by Burns & McDonnell Engineering Company, Inc.

City personnel suggested that the population for O'Fallon be limited to 43,000 in Year 2025 due to land availability limitations and that the population for Fairview Heights be increased to 28,000 in Year 2025 due to availability of area for future development.

Review/Approval of Projected Water Demands

SvCv personnel reviewed selected criteria for developing future water demands in the Draft Preliminary Findings Memorandum (see attached Tables 3 and 4).

1. City staff agreed to 125 gallons per capita per day (gpcd) average water demand criteria and an average day to peak day ratio of 2. These criteria were used to develop average daily water demand projections in the "Water Distribution System Analysis and Capital Improvement Plan for City of O'Fallon, Illinois", January 1997, prepared by Burns & McDonnell Engineering Company, Inc.

2. SvCv personnel noted that based on Year 2000 operating reports provided by the City, the average daily water usage (for Year 2000 population) was approximately 150 gallons per capita per day. City personnel noted that increased water usage could be due to distribution improvements and unaccounted-for water is about 10-11 percent of annual water usage. Because the average to peak ratio of 2 is conservatively high, it was agreed to use the average daily water demand criteria of 125 gpcd for conceptual design.

3. City staff confirmed that criteria of 125 gpcd used in the above-referenced January 1997 report included industrial demands. There is currently not significant industry in O'Fallon, primarily just two dairies.

4. City staff confirmed that fire protection demands and equalization will be provided by storage tanks as indicated in the "Water Distribution System Analysis and Capital Improvement Plan for City of O'Fallon, Illinois", January 1997, prepared by Burns & McDonnell Engineering Co., Inc. Current storage provided by four tanks is 2.5 MG. The city is adding a 0.5-MG storage tank. Their ISO rating recently dropped from a 6 to a 4.

Project Schedule Impacts

The Draft Preliminary Findings Report will be finalized once the City has determined which interested parties should be included in the project. SvCv will contact M. Huq in a few weeks to discuss status of interested entities. SvCv will then prepare a revised project schedule for City's approval.

Conceptual Design Activities

Task 2, Conceptual Design, will commence once the City has determined which interested parties are viable and should be included in conceptual design considerations regarding future design demands and routing alternatives.

Action Item List

As a result of this meeting, the following action items and responsible parties were defined:

Action Item	Responsible Party	Due Date
1. Develop list of contacts for O'Fallon	TWM (R. Burk)	By May 4
2. Contact Maryville	TWM (R. Burk)	May 15
3. Contact IAWC	TWM (R. Burk)	May 15
4. Contact interested parties: • National Steel (Granite City) • Village of Pontoon Beach • Scott Air Force Base • City of Edwardsville • Village of Caseyville	City of O'Fallon	May 15
5. Contact M. Huq to discuss Action Item 4	Sverdrup Civil (T. Meinhart)	May 15
6. Revise population projections	Sverdrup Civil (S. Fahnestock)	May 8

These minutes represent Sverdrup Civil, Inc.'s interpretations of the issues discussed. Should any errors, omissions, or clarifications be identified, please notify the originator as soon as possible.

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All attendees
C5X56400/Correspondence

City of O'Fallon , Illinois
Alternative Water Supply Project

Project Review Meeting – Task 1

May 1, 2001

Agenda

- Status of Potential Water Supply Partners
- Proposed Action Plan to Gain Additional Interest
- Contact with Illinois-American Water Company
- Review/Approval of Population Projections
- Review/Approval of Projected Water Demands
  - Industrial Contribution
  - Fire Protection Demands
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- Conceptual Design Activities

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Dear

D. Population Projections and Future Water Demands

The results of the 2000 Census has reported the City of O'Fallon and the City of Fairview Heights populations to be 21,910 and 15,034, respectively. Table 2 provides a summary of the population projections for the study period from 2000 through 2025. The City's population projections were calculated by using an increase of 3 percent per year, according to the *O'Fallon, Illinois Comprehensive Plan, "Working Document"*. It should be noted that from 1994 to 1997, Fairview Heights' population increased at an annual rate of approximately 2.16 percent. This annual increase was used to calculate the population projections for Fairview Heights presented below. However, from a review of 1997 data and the 2000 census figures it appears that Fairview Heights' population actually decreased between 1997 and 2000 from 15,745 to 15,034.

TABLE 2 - POPULATION PROJECTIONS FOR O'FALLON AND FAIRVIEW HEIGHTS

Year	O'Fallon	Fairview Heights	Total
2000	21,910	15,034	36,944
2005	25,400	16,729	42,129
2010	29,445	18,616	48,061
2015	34,135	20,715	54,850
2020	39,572	23,051	62,623
2025	45,875	25,651	71,525

The corresponding projected water demands for Years 2020 and 2025 are provided in Table 3. These values were developed using the projected population values presented in Table 2, and an average daily demand of 125 gallons per capita per day, obtained from the Burns and McDonnell report, *Water Distribution System Analysis and Capital Improvements Plan.* It has been assumed that the industrial contribution was accounted for in the 125 gallons per capita per day due to the fact that the referenced report discussed the billing records for the major water users. However, the demands presented in the report did not clearly indicate a separate industrial contribution component in the demand projections. Also, it is assumed that fire protection demands are provided by the City's ground storage reservoirs, as stated in the Burns and McDonnell report referenced above.

Using the 125 gallons per capita per day, and the 2000 combined population of 36,944, the calculated average daily water demand for O'Fallon/Fairview Heights is approximately 4.6 MGD. After reviewing the current water demand, there appears to be a discrepancy between the calculated average daily demand and the actual usage of 5.7 MGD, calculated from O'Fallon's *Distribution System Operating Reports* for January 2000 to December 2000. This apparent discrepancy warrants additional discussion with the City prior to finalizing the demand projections. However, for purposes of this memorandum, the average daily demand of 4.6 MGD was used. In Year 2025, the projected average daily demand will increase to approximately 8.9 MGD. At this present time, National Steel has expressed interest in purchasing water from the City; therefore, an additional 4 MGD will be added to the total demand projections. National Steel has indicated that the 4 MGD demand is an accurate depiction for daily average and peak demand. National Steel also indicated that due to water conservation efforts this figure should remain constant during the entire study period. Consequently, the total average daily demand for Year 2025 is 12.9 MGD. From the Burns and McDonnell report, a ratio of 2.0 was used to determine the Peak to Average Day Demand ratio. Therefore, upon the same premise, the Year 2000 peak daily demand of 9.2 MGD is expected to increase to approximately 17.9 MGD in the Year 2025. With the addition of National Steel, the Year 2025 peak daily demand will be approximately 21.9 MGD.

TABLE 3 - TOTAL WATER DEMANDS FOR YEARS 2000, 2020 AND 2025 FOR O'FALLON/FAIRVIEW HEIGHTS AND NATIONAL STEEL

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National Steel	4	4	4	4	4	4
Total	**8.6**	**13.2**	**11.8**	**19.7**	**12.9**	**21.9**

With further negotiations, Pontoon Beach and Scott Air Force Base could potentially become customers. Therefore, Table 4 includes the projected demands for incorporating Pontoon Beach and Scott Air Force Base as customers. The Year 2000 average daily demands of 0.5 MGD and 1.5 MGD were obtained from discussion with the Water personnel in Pontoon Beach and Scott Air Force Base. These demands need to be further documented prior to commencing final design activities of the system improvements, should these two entities decide to participate in the project.

TABLE 4 – TOTAL WATER DEMANDS FOR YEARS 2000, 2020 AND 2025 O'FALLON/FAIRVIEW HEIGHTS, NATIONAL STEEL, PONTOON BEACH AND SCOTT AFB

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3. Meet with City of O'Fallon staff to review pipeline route and pumping station location alternatives. Select the preferred pumping station location and pipeline route based on overall length, topography, number of easements required, physical obstacles, permitting requirements, and points of connections with other participating water systems. The selected route will be used as the basis for the feasibility study.

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1.8

JE Sverdrup
A Jacobs Company

Sverdrup Civil, Inc.
St. Louis Environmental
13723 Riverport Drive
Maryland Heights MO 63043
314-436-7600

Fax

To:	M.Huq	**From:**	Susan Fahnestock
Of:	City of O'Fallon	**Phone:**	314.770.4014
Fax:	618.624. 4534	**Fax:**	314.770.5113
Phone:	618.624.4500	**E-mail:**	Sue.fahnestock@jacobs.com
Pages:	cover + 9	**Date:**	May 3, 2001

☐ Urgent ☒ For Review ☐ Please Comment ☐ Please Reply ☐ Hard Copy to Follow

- **Comments:**

Huq,

Please review the following minutes from our review meeting of the draft Preliminary Findings Memorandum. If you have any questions or comments, please feel free to contact me.

Sue Fahnestock

C TM/C5X56400/Correspondence

FAXED: #_____ Date:_____ Time_____ by_____

JE Sverdrup
A Jacobs Company

Sverdrup Civil, Inc.
St. Louis Environmental

Meeting Memorandum

To: **Distribution**

From: **Susan E. Fahnestock, P.E.**

Subject: **City of O'Fallon, Illinois**
Alternative Water Supply Project
Project Review Meeting for Task 1-Preliminary Findings Memorandum

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A meeting was held for the above referenced project on May 1, 2001, at O'Fallon City Hall. The purpose of the meeting was to review the Draft Preliminary Findings Memorandum. A copy of the meeting agenda is attached. The following individuals were in attendance:

Sverdrup Civil, Inc.	City of O'Fallon	Thouvenot, Wade & Moerchen, Inc.
Thomas J. Meinhart	M. Huq	Randy Burk
Susan Fahnestock	Sid LeGrand	
	Dean Rich	
	Craig S. Owens	

Status of Potential Water Supply Partners

TWM personnel provided an overview of discussions with potential water supply partners as follows:

1. National Steel (Granite City) is interested in purchasing water from the City. D. Rich suggested that any agreement with National Steel include a guarantee that they will purchase water for a minimum numbers of years (say 20).

2. Village of Pontoon Beach is interested, but presently has a 40-year contract with Illinois-American Water Company (IAWC). If rates from O'Fallon are competitive, Pontoon Beach personnel indicated that they may try to break their IAWC contract.

3. City of Edwardsville is not interested in partnering due to recent upgrades to their water treatment facility. However, due to the size of their service area and a potential need for alternative service they may be interested in the purchase of water.

4. Village of Glen Carbon is not interested as it has a 20-year service agreement with City of Edwardsville.

5. City of Collinsville is not interested in partnering with O'Fallon, but expressed interest in selling water to the City of O'Fallon. City staff indicated concern that Collinsville would not be able to economically supply water for future growth in O'Fallon. Therefore, City staff does not feel that connecting with Collinsville is a realistic option at this time.

6. Village of Maryville has been unresponsive to requests for potential interest. S. LeGrand offered the name of the Village attorney, Steve Wigginton. R. Burk will attempt to contact Mr. Wigginton.

7. Village of Caseyville indicated that they were not interested in partnering as they are currently planning to construct their own water treatment plant. The Village is concerned about having to rely on IAWC for emergency service.

8. SLM Water Commission is not interested in partnering due to recently expanded water treatment facility. SLM was initially interested in selling water to City of O'Fallon, but further investigation indicated that servicing the City of O'Fallon would require significant capital improvements, such as doubling current water treatment plant capacity.

9. Scott Air Force Base (AFB) may be interested in purchasing water from the City of O'Fallon if costs are competitive with IAWC. They currently pay about $1.40-$1.60 per 1000 gallons. D. Rich indicated that the City has had several conversations with Scott AFB over the years concerning water and sewer service. He believes Scott AFB is a viable customer for the City.

10. The City of O'Fallon's water system should be fed from the West, due to the size and alignment of the City's distribution system.

11. The City of O'Fallon does not currently have a contract with IAWC, who continues to provide them with water.

Proposed Action Plan to Gain Additional Interest

City staff agreed that the following entities appear to be the most viable partners/customers in this alternative water supply project:

- National Steel (Granite City)
- Village of Pontoon Beach (only viable if National Steel is committed)
- Scott Air Force Base
- City of Edwardsville
- Village of Caseyville

City of O'Fallon personnel will contact each of these parties to discuss the proposed water supply project and to determine whether the level of interest is high enough for them to be included in the conceptual design of the project.

TWM personnel will provide M. Huq with contact information.

1.B

Contact with Illinois –American Water Company

TWM personnel will contact IAWC to see if they are interested in joining the City of O'Fallon in the proposed alternative water supply project. City personnel suggested contacting Terry Gloriod, President of IAWC. TWM personnel will not discuss information concerning O'Fallon's plans nor discussions with contacted parties and will direct all such questions to the Mayor of O'Fallon.

Review/Approval of Population Projections

SvCv personnel reviewed the population projections developed in the Draft Preliminary Findings Memorandum (see attached Table 2, Population Projections, for O'Fallon and Fairview Heights). Projections are based on Year 2000 census data and an annual increases of 3 percent per year for O'Fallon and approximately 2.16 percent per year for Fairview Heights. The populations are slightly higher than those developed in the "Water Distribution System Analysis and Capital Improvement Plan for City of O'Fallon, Illinois", January 1997, prepared by Burns & McDonnell Engineering Company, Inc.

City personnel suggested that the population for O'Fallon be limited to 43,000 in Year 2025 due to land availability limitations and that the population for Fairview Heights be increased to 28,000 in Year 2025 due to availability of area for future development.

Review/Approval of Projected Water Demands

SvCv personnel reviewed selected criteria for developing future water demands in the Draft Preliminary Findings Memorandum (see attached Tables 3 and 4).

1. City staff agreed to 125 gallons per capita per day (gpcd) average water demand criteria and an average day to peak day ratio of 2. These criteria were used to develop average daily water demand projections in the "Water Distribution System Analysis and Capital Improvement Plan for City of O'Fallon, Illinois", January 1997, prepared by Burns & McDonnell Engineering Company, Inc.

2. SvCv personnel noted that based on Year 2000 operating reports provided by the City, the average daily water usage (for Year 2000 population) was approximately 150 gallons per capita per day. City personnel noted that increased water usage could be due to distribution improvements and unaccounted-for water is about 10-11 percent of annual water usage. Because the average to peak ratio of 2 is conservatively high, it was agreed to use the average daily water demand criteria of 125 gpcd for conceptual design.

3. City staff confirmed that criteria of 125 gpcd used in the above-referenced January 1997 report included industrial demands. There is currently not significant industry in O'Fallon, primarily just two dairies.

4. City staff confirmed that fire protection demands and equalization will be provided by storage tanks as indicated in the "Water Distribution System Analysis and Capital Improvement Plan for City of O'Fallon, Illinois", January 1997, prepared by Burns & McDonnell Engineering Co., Inc. Current storage provided by four tanks is 2.5 MG. The city is adding a 0.5-MG storage tank. Their ISO rating recently dropped from a 6 to a 4.

Project Schedule Impacts

The Draft Preliminary Findings Report will be finalized once the City has determined which interested parties should be included in the project. SvCv will contact M. Huq in a few weeks to discuss status of interested entities. SvCv will then prepare a revised project schedule for City's approval.

Conceptual Design Activities

Task 2, Conceptual Design, will commence once the City has determined which interested parties are viable and should be included in conceptual design considerations regarding future design demands and routing alternatives.

Action Item List

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Action Item	Responsible Party	Due Date
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4. Perform preliminary design of Mississippi River crossing to determine length, depth, geometry, and configuration of pipeline from St. Louis to the east side of the river.

5. Select material, thickness, and fittings for water transmission pipeline to meet the required pressure, ground conditions, and special needs for highway, railroad, and river crossings.

6. Perform conceptual design of the major components of pumping station including pumps, valves, surge control, primary and standby electrical power supply, control system, rechlorination (if required), and architectural treatment. Prepare conceptual pumping station and reservoir site plan; building plans and elevations; and process and instrumentation diagrams.

7. Retain the services of a geotechnical drilling firm to perform one (1) boring on each side of the Mississippi River at the proposed crossing location and two (2) borings on the proposed pump station and reservoir site.

8. Prepare preliminary construction cost estimate of proposed facilities

JE JACOBS

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Memorandum

Date October 16, 2001

To Distribution List

From Susan Fahnestock

Subject City of O'Fallon, Illinois
Alternative Water Supply Study Project
Review of Illinois-American Water Company Cost Estimate

As requested by the City of O'Fallon during our October 3, 2001 meeting, we have reviewed the "Detailed Estimate of Cost, New Water Main from the City of St. Louis to Serve O'Fallon, Illinois, dated June 19, 2000, developed by Illinois American Water Company (IAWC). The IAWC total project cost estimate is approximately $13.5 million. A copy of the IAWC estimate is attached for reference.

In May 2000, Sverdrup Civil, Inc (Sverdrup) also developed a conceptual project cost estimate to purchase water from the City of St. Louis to serve O'Fallon, Illinois. The Sverdrup total project conceptual cost estimate is approximately $21.6 million. A copy of the Sverdrup conceptual cost estimate is attached for reference.

The Sverdrup conceptual project cost estimate is approximately $8 million more than the IAWC cost estimate. A comparison of the IAWC and Sverdrup conceptual cost estimates for major components of the alternative water supply project is presented in Table 1. Significant differences, which were noted, are as follows:

Difference 1: Water Main Diameter and Length

The IAWC cost estimate is based on 45,000 lf of 24-inch diameter water main. Sverdrup's conceptual cost estimate is based on a southern route of approximately 70,000 lf of 30-inch diameter water main. A northern route was also considered with a water main length of 64,000 lf. The alignment selected for further evaluation will be based on entities served by the project and the cost effectiveness of the tie-in point to the City of St. Louis water system.

Conceptual sizing of the water main by Sverdrup was based on a peak flow of 12 mgd. The IAWC cost estimate gave no design flow basis. Further evaluation of water main size will be based on the estimated future water demands of the entities served by the project. For example, the draft "Preliminary Findings Memorandum" submitted by Sverdrup in April 2001, showed a peak daily demand of 21.9 mgd in the Year 2025 for O'Fallon, Fairview Heights and National Steel (Granite City).

The IAWC cost estimate is based on a unit cost of $111 per lineal foot. The Sverdrup cost estimate is based on $75 per lineal foot. Both estimates include pipe, valves, fittings and installation.

While the IAWC pipe and installation cost of approximately $5.0 million (45,000 lf of 24-inch diameter main) is comparable to the Sverdrup cost estimate of $5.25 million (70,000 lf of 30-inch diameter main), the IAWC estimate does not appear to include the following additional construction items:

- Valve vaults (6) — Sverdrup cost estimate = $ 900,000
- Pigging, Testing, Disinfection — Sverdrup cost estimate = $ 250,000

Therefore, Sverdrup's estimate for the transmission main is $1.4 million higher than the IAWC estimate for the transmission main, including valve vaults, pigging, testing and disinfection.

Difference 2: River Crossing Cost

IAWC's river crossing cost estimate of $1.56 million is significantly less than the Sverdrup conceptual estimate of $ 4.5 million. Based on the assumption that the IAWC estimate is for 3,000 feet of 24-inch diameter pipeline installed by means of HDD, the unit cost is approximately $21.71 per inch-foot. The Sverdrup river crossing cost estimate of $ 4.50 million is based on 3,000 feet of 30-inch pipeline installed by means of HDD with a unit cost of approximately $50 per inch-foot.

The proposed river crossing is anticipated to be installed in an alluvial subsurface condition, however this needs to be confirmed during the conceptual design and final design phases of the project. The cost of a horizontal directional-drilled river crossing can vary widely based upon the type of subsurface conditions, which are encountered during the drilling activities. Sverdrup has seen HDD construction bids for alluvial crossings as low as $15 per inch-ft. and costs as high as $126 per inch-ft in rock conditions. Therefore, we have used a conservative unit cost of $50 per inch-foot to provide a budgetary estimate until the actual subsurface conditions are determined.

Sverdrup's estimate is $2.94 million higher than the IAWC estimate for the river crossing.

Difference 3: Pump Station and Reservoir

IAWC's cost estimate of $2 million for the booster pump station and ground storage tank is less than the Sverdrup estimate of $3.5 million. It appears from a review of the IAWC estimate that a modular type pumping station was used as the basis of IAWC's estimate.

Sverdrup's estimate is $1.5 million higher than the IAWC estimate for the pumping station and reservoir.

Difference 4: Other Costs (includes Engineering, Legal, Admin, and Contingency)

IAWC's cost estimate for engineering permits and contingency is approximately $2.08 million. The Sverdrup conceptual cost estimate for engineering, legal, administrative fees and contingency is approximately $3.6 million

Sverdrup's estimate is approximately $1.52 million higher than the IAWC estimate for these costs.

Summary

We have attempted to direct your attention to the significant cost differences between the Sverdrup and IAWC cost estimates, however it should be noted that Sverdrup will provide the City with a revised conceptual cost estimate as part of Task 2 of our contract with the City. In preparing the revised conceptual cost estimate, Sverdrup will have preliminary geotechnical data for the proposed river crossing, estimated future water demands and conceptual design information such as the size, length and routing of the proposed transmission main and the capacity of the proposed pumping and storage facilities. This estimate will provide the City with a better understanding of the estimated capital costs associated with the project.

Should you have any questions regarding the information presented above, please feel free to contact Tom Meinhart or myself.

Attachments (3)

Distribution List
S. LeGrand – City of O'Fallon
D. Rich – City of O'Fallon
C. Owens – City of O'Fallon
T. Meinhart – SvCv
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CITY OF O'FALLON, ILLINOIS
ALTERNATIVE WATER SUPPLY

COMPARISON OF CONCEPTUAL PROJECT COST ESTIMATES

	Sverdrup		Illinois American		
Cost Items	Quantity	Cost Estimate ($)	Quantity	Cost Estimate ($)	Difference
Construction Costs					
Water Main	70,000 lf of 30" diam	5,250,000	45,000 lf of 24" diam	4,993,000	257,000
River Crossing	3,000 lf of 30" diam	4,500,000	3,000 lf of 24" diam	1,563,000	2,937,000
Bored Road/Railroad Crossing	5,000 lf	2,500,000	7,200 lf	2,160,000	340,000
Pumping Station & Reservoir		3,500,000		2,015,000	1,485,000
Valve Vaults (6)		900,000		0	900,000
Connection with City System/ Metering Vault		600,000		195,000	405,000
Pigging, Testing, Disinfection		250,000		0	250,000
Construction Subtotal		**17,500,000**		**10,926,000**	**6,574,000**
Property Acquisition & Easement Costs					
Pump Station & Reservoir Site/Access		300,000		90,000	210,000
Easements		200,000		381,000	-181,000
Property & Easement Subtotal		**500,000**		**471,000**	**29,000**
Other Costs					
Engrg, Legal, Administration Fees	10%	1,800,000	7.50%	852,000	948,000
Project Contingency	10%	1,800,000	10%	1,225,000	575,000
Other Costs Subtotal		**3,600,000**		**2,077,000**	**1,523,000**
TOTAL PROJECT COST ESTIMATE		**21,600,000**		**13,474,000**	**8,126,000**